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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/771,809 | 01/29/2001 | Glenn G. Amatucci | 15884-54 | 7825 |

7590 07/28/2006

DOCKET ADMINISTRATOR
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| EXAMINER |
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MERCADO, JULIAN A

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| ART UNIT | PAPER NUMBER |
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1745

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,809

Applicant(s)

AMATUCCI, GLENN G.

Examiner

Julian Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

This Office action is responsive to applicant's amendment filed May 11, 2006.

Claim Rejections - 35 USC § 103

The rejection of claims 8- 11 under 35 U.S.C. 103(a) based on Yamawaki et al. (U.S. Pat. 6,475,673 B1) has been withdrawn.

The rejection based on Yamakawi et al. is withdrawn on the following grounds: the examiner's interpretation of Yamakawi et al., in disclosing particle sizes "in the range of 0.1 to 15 μm ..." has been reconsidered. This interpretation of Yamakawi et al., as communicated to applicant during the March 24, 2006 interview, was premised on the lowermost particle size in the range of 100 nm as being, e.g. 99 nm, 100 nm and 101 nm. However, a closer reading reveals that by "in the range," the patentees were referring to particle sizes within the range of 0.1 μm to 15 μm , i.e. with 0.1 μm and 15 μm as the endpoints of the range. Even if Yamakawi et al. were to have a particle size of 99 nm from systematic and/or random variations during production, the particles *en toto* would not have an *average* particle size of less than 100 nm due to the prevalence of larger particles up to and including 15 μm in size.

Moreover, the present amendment now introduces the limitation nanostructured for the lithium titanate compound. This limitation introduces into the claimed invention the recognized phenomena associated with engineered nanomaterials, as summarized by applicant on page 8 of the present response. Additionally, this limitation is understood to characterize the claimed

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invention as being derived from a nanostructured material, in contrast to Yamakawi et al. which is drawn to microstructured material, i.e. starting from micron-sized precursors.

As to unexpected results of particle sizes less than 100 nm, the examiner acquiesces with applicant's assertion that Figure 5 shows a higher retained capacity for lithium titanate particles produced after 15 minutes of annealing (equal to a particle size of less than 100 nm).

Allowable Subject Matter

In view of the foregoing discussion of the closest prior art, claims 8-11 are allowed.

Conclusion

This application is in condition for allowance except for the following formal matters:

1. Claims 1-7, drawn to withdrawn claims, require cancellation or other appropriate course of action.

Prosecution on the merits is closed in accordance with the practice under *Ex parte*

Quayle, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

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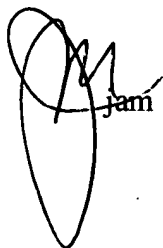
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER



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